

Title (en)
OPENING AND CLOSING DEVICE FOR PULL-CABLE TYPE SUNROOF

Title (de)
SEILZUG-ANTRIEB FÜR EIN VERSTELLBARES SCHLIESSELEMENT IM FAHRZEUGDACH

Title (fr)
DISPOSITIF D'OUVERTURE-FERMETURE POUR TOIT OUVRANT AVEC COMMANDE PAR CABLES

Publication
EP 1279537 A4 20030129 (EN)

Application
EP 00978082 A 20001204

Priority
• JP 0008587 W 20001204
• JP 34494599 A 19991203
• JP 2000071606 A 20000315

Abstract (en)
[origin: EP1279537A1] A opening and closing device 10 for sunroofs of an automobile, which has a pair of rails 17a and 17b, a lid 13 for opening and closing an opening 12, right and left cables 26 engaged to a lid 14 and arranged along the rails 17a and 17b, and a drive mechanism 36 for driving the cables in a reciprocating manner. The cables 26 construct a closed loop arrangement with bypassing the opening 12 of the loof of the automobile. One of the cable 26 coming out of the drive mechanism 36 is arranged to the right-side rails 17b, bridged to the left side rail 17b, reversed at the base end of the left side rail 17a and returned along the same route to the drive mechanism 36. <IMAGE>

IPC 1-7
B60J 7/057; **E05F 11/48**; **E05F 11/53**; **E05F 15/14**

IPC 8 full level
E05F 11/53 (2006.01); **B60J 7/02** (2006.01); **B60J 7/057** (2006.01); **E05F 15/14** (2006.01)

CPC (source: EP KR US)
B60J 7/022 (2013.01 - EP US); **B60J 7/057** (2013.01 - KR); **B60J 7/0573** (2013.01 - EP US); **E05F 15/643** (2015.01 - EP US); **E05Y 2201/654** (2013.01 - EP US); **E05Y 2201/668** (2013.01 - EP US); **E05Y 2201/702** (2013.01 - EP US); **E05Y 2600/20** (2013.01 - EP US); **E05Y 2900/542** (2013.01 - EP US)

Citation (search report)
• [Y] EP 0034965 B1 19831012
• [Y] US 4081926 A 19780404 - JARDIN HANS
• [A] US 4848827 A 19890718 - OU JAN C [TW]
• See references of WO 0140006A1

Cited by
FR2893346A1; EP1650069A1; FR2931104A1; EP1762692A2; US8562070B2; WO2009138518A3; WO2007079740A1; WO2012079799A1; WO2007057205A1; WO2004103752A1; DE102020200648A1; DE102020200648B4; EP2113419B2

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